

USDA-Natural Resources Conservation Service

Notice of Source Identified Plant Release

Little bluestem

The USDA-Natural Resources Conservation Service (NRCS), the University of Northern Iowa (UNI), the Iowa Integrated Roadside Vegetation Management Program (IRVM), the Iowa Department of Transportation (IDOT), and the Iowa Crop Improvement Association (ICIA) announce the release of a source identified Northern Iowa Germplasm little bluestem, *Schizachyrium scoparium*, Michx.

The little bluestem has been assigned the NRCS accession number 9062319.

Origin: Northern Iowa Counties.

Ecotype Description:

Little bluestem is a medium tall, warm season, bunch type grass with coarse stems at basal leaves. As a perennial it begins growth in late spring and continues through the hot summer period until the first killing frost. It is easily mistaken for common broomsedge, *Andropogon virginicus*. Plants are slender to robust, compressed, 50 to 150 cm. tall, erect, the upper half freely branching; sheaths and blades commonly glabrous or nearly so, frequently sparsely pilose at their junction, rarely pubescent to villous throughout, the blades 3 to 6 mm. wide, flat; raceme 3 to 6 cm. long, mostly curved, the filiform peduncles mostly wholly or partly included in the sheaths, commonly spreading, the rachis slender, flexuous, pilose, sometimes copiously so; sessile spikelet mostly 6 to 8 mm. long, scabrous, the awn 8 to 15 mm. long; pedicellate spikelet usually reduced, short-awned, spreading, the pedicel pilose. It develops full stands where moisture is sufficient, but gets clumpy on drier sites. It has value as a persistent low maintenance cover plant and as a summer forage plant.

Little bluestem occurs in prairies, glades, rocky open woods, abandoned fields, sandy open ground, waste places, and along railroads. It ranges from New Brunswick and Quebec to Alberta, south to Florida, Texas, and Arizona.

Little bluestem seeds per pound average 260,000. A seeding rate of 40 pure live seeds (PLS) per linear foot in 36 to 40 inch rows for seed production is sufficient. Rates for pasture seeding should be eight to ten PLS pounds per acre. Seed should be planted 1/4 to 1/2 inch deep in a firm relatively weed free seedbed; generally little bluestem is one component of a range mix, so rate varies depending on percent

desired in the stand. Seedling vigor is good and stands are comparatively easy to establish where competition is controlled. Mowing above the height of the little bluestem has been used to reduce competition when weeds begin to severely encroach into the planting.

Plateau herbicide is available for use in the establishment of little bluestem. Post-emergence broadleaf sprays (2-4D) have been used during little bluestem establishment. Burning established fields in April reduces competition and encourages seed head to fill.

Seed yields are good and can be harvested with a combine. Yields may range from 100 to 200 pounds per acre have been commonly harvested on managed stands.

Collections of little bluestem from east to west across Iowa permits positive assessment of all pollination of chromosome characteristics. Plants are cross-pollinated. For isolation requirement, little bluestem should be spaced a minimum of 1000 feet from any other different little bluestem selection.

Little bluestem is adapted to a wide variety of soil. It grows well on deep to shallow, sandy to fine-textured and rocky soils. It tolerates low rainfall and is often found on droughty sites. It is not tolerant to heavy shade. Ecotypes are adapted to areas with as little as 14 inches to over 50 inches of average annual precipitation.

Site Description:

Seven (7) collections from six (6) counties in northern Iowa guarantees the adaptation of releases to the entire zone. A list of the locations and site information is attached to this document.

Climate:


The average annual temperature is 48 degrees Fahrenheit. July is the warmest month with an average high of 85 degrees and low of 67 degrees. January is the coldest month with an average high of 27 degrees and low of 8 degrees. The average annual precipitation for this region is 30 inches with much of this coming during the growing season. The average frost-free growing period runs from April 30 to October 6.

Availability of Plant Materials:

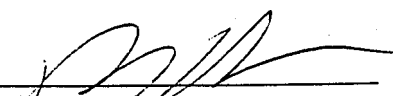
Breeders material is being produced in limited supply by the Plant Materials Center, located in Elsberry, Missouri.




Release Approved Ev:


Roger A. Hansen, NRCS
Missouri State Conservationist


Date: 6-16-99


Robert D. Koob
President, UNI

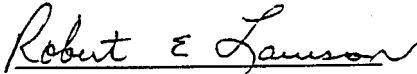
Date: 6-28-99


Leroy Brown, NRCS
Iowa State Conservationist

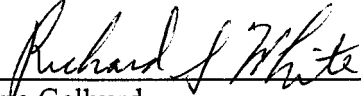
Date: 6-18-99


Daryl D. Smith
Program Director, IRVM

Date: 6-17-99


Robert E. Lawson
Secretary/Treasurer, ICIA

Date: JUN 29 1999


for Diane Gelburd
Director, Ecological Sciences Division
United States Department of Agriculture
Natural Resources Conservation service
Washington, DC

Date: 8/10/99

REFERENCES

Manual of the Grasses of the United States; **pp.** 753-755, Hitchcock, A. S., United States Department of Agriculture, Washington, DC, 1951.

Forages; **p.** 514, Hughes, H. D.; Heath, M. E.; Metcalfe, D. S., The Iowa State College Press, Ames, Iowa, 1951.

Flora of Missouri; **p. 244;** Steyermark, J. A.; Iowa State University Press, Ames Iowa, 1968

Badlands Ecotype Little Bluestem, United State Department of Agriculture, Natural Resources Conservation Service, Plant Materials Center, Bismarch, North Dakota, 1997.

